

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Trex Advanced Materials

#### Hawaii HTDC- MEP

#### Trex Advanced Materials Benefits from Energy Assessment

##### Client Profile:

Trex Advanced Materials (TAM), located in Lihue, Hawaii is focused on researching, developing and manufacturing chemical vapor composite (CVC) SiC products, fabricated utilizing its patented CVC technology. This product category consists of fine-grain silicon carbide compositions formulated for high temperature applications requiring very high strength, minimal creep under load and low mass. The CVC SiC products are rapidly gaining acceptance in a number of high value added applications within the Department of Defense and industry. TAM employs 24 people.

##### Situation:

TAM is situated on the island of Kauai, where electricity prices are among the highest in the U.S.; rates have spiked up to nearly \$0.50 per kWh in the past year. CVC processing is relatively energy intensive requiring high vacuum and high temperature environments to facilitate the process. As such, electricity costs are approximately \$1 million per year, by far the largest operating expense. The company contacted Hawaii MEP (HTDC- MEP), a NIST MEP network affiliate, for help.

##### Solution:

HTDC-MEP partnered with the U.S. Department of Energy's Industrial Assessment Center (DOE IAC) from San Francisco State University to deliver a detailed energy and waste stream assessment. The assessment thoroughly examines each piece of equipment (vacuum pumps, compressors, motors, heating, filtration, flywheel, and generators), lighting systems, HVAC systems and the operating practices. DOE IAC recommended new equipment (i.e. occupancy sensors, variable frequency drives, etc) and operating practices (i.e. optimizing systems and equipment operating times) to reduce operating costs while maintaining the quality, throughput and safety of the operations. HTDC -MEP also assisted the company in receiving Hawaii Small Business Innovation Research phase II awards to develop and commercialize new technologies.

##### Results:

- \* Anticipated reduction in electricity and waste management costs by 25 percent or nearly \$250,000.
- \* Received a Hawaii SBIR grant to develop and commercialize technologies.

##### Testimonial:

"HTDC-MEP has been vital in helping us raise funds to pursue our innovative products and further assistance in improving our operations and profitability by showing us new ways to save on electricity and waste management."

Dave Kane, VP & General Manager

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